GROUNDWATER INTERNET SITE ACTIVITIES

Using the EPA groundwater site **(http://www.epa.gov/seahome/groundwater/src/basics.htm#menu)**, answer the following questions:

1. Define groundwater.

2. How much of the earth's freshwater supply is available as surface or ground water? How much of this is ground water?

3. Out of 10, how many public water systems get their water from wells?

4. What is a PWS?

5. How much water falls on the United States each day?

6. Does the earth ever lose water?

7. What is the water budget and what is the US water budget?

8. How much rain goes back into the ground annually? Should this affect the way we use water?

9. How much water is used in the US each day? Knowing how much water falls on the US each year, calculate how many days it takes to use the annual amount of precipitation. What percent of this water used goes back into the ground?

10. What percent of Americans live in the arid west? What percent of the US water do they use daily?

11. What is the zone where the term ground water is used correctly?

12. What is an aquifer?

13. How much will ground water typically flow each year?

14. What are some factors that influence recharge rate?

15. What is the downdraw and how is it helpful?

Answers:

1. Groundwater is the water held in the interconnected openings of saturated rock beneath land surface. (Hydrogeologic Menu Section)

2. 1% of the earth's water is available fresh water; 2/3 is ground water

3. 9 out of 10 public water systems use wells

4. Public Water System

5. 4.2 trillion gallons of water falls on the US each day

6. No, the volume of water is constant on the earth, is just changes form or moves

7. The water budget is the amount of water received annually for an area. The US water budget would cover the entire country in 30 inches of water

8. Only 0.1 of an inch goes back into the ground water. We should keep this in mind when we are thinking about irrigation, well use, etc.

9. 450 billion gallons of water are withdrawn each day. It takes less than 10 days to use the annual amount of precipitation. About ¾ of this water is returned.

10. 28% of the population lives in the west and they use 80% of the nation's water

11. The saturated zone is the term

12. An aquifer is a rock unit that will yield water in usable quantities to wells or springs

13. Unlike fast moving surface water, ground water will flow several inches to several a feet a year. (Water Movement in Aquifer Section)

14. Recharge can be affected by: characteristics of soil, plant cover, slope, water on the surface, amount of rainfall, presence of confining layers and aquifers (How Aquifers are Replenished Section)

15. Downdraw is the vertical drop in height between water level in a well before pumping and the level during pumping. It helps ensure continuous supply of water, helps identify overlying land for management purposes, and could show change in a water source (Ground water and wells Section)